

respectfully disagrees; Waschura does not show or suggest receiving digital graphics data at a graphics port as claimed in claim 14. (1)

In column 4, at line 47 of Waschura, the serial communications port 38 is described as a serial data port and cites RS232 and IEEE4888 data ports as examples. Unless the Examiner can cite some reference showing an RS232 or IEEE488 port being used for digital graphics data, the applicant submits that the serial communications port 38 cannot be cited as the graphics port mentioned in claim 14. Data ports like RS232 and IEEE4888 ports are known to be used to control peripheral computer equipment, albeit by serial data. Waschura's serial data port, i.e., the communications port 38 is not a graphics port and it cannot function to receive digital graphics data, as claimed in claim 14. W ref }

The Examiner cited column 5, lines 23 to 32 of Waschura as ostensibly teaching that the serial communications port 38 receives digital graphics data from the device under test. A review of column 5, lines 23-32 of Waschura shows that it describes how the test apparatus disclosed in Waschura displays a video image on a video monitor and stores that test information on a hard disk or floppy disk drive. Displaying a video image on a video monitor and sending (or receiving) test data to a device under test are distinctly different operations. Waschura at column 5, lines 23-32 does not show or suggest the receipt or transmission of digital graphics data at a graphics port as claimed in Claim 14.

The Examiner also cited figure 4 and column 5, lines 58-66 as ostensibly showing the claimed provision of a characteristic value over a serial interface. The Waschura passage cited by the Examiner describes the operation of the test generator board 40 and the detector board 80 shown in figure 1 of the Waschura reference. The cited Waschura passage does not teach or suggest that the output of the generator board 40 is a "characteristic value" based upon the digital graphics data recited in Claim 14. Information generated by the generator board 14 of Waschura is *not* the digital graphics data as claimed in claim 14.

Rejection under §102 requires that each and every one of the claim's limitations be found in a single reference. The applicant therefore respectfully requests the Examiner to identify where the limitations of claim 14 are located in the Waschura, by column and line number.

Claims 15 and 16 were also rejected by the Examiner. The Examiner cited column 4, lines 43-64 of the Waschura reference as ostensibly showing the limitations of Claims 15 and 16. Column 4, lines 43-64 is devoid of any teaching or suggestion of a digital graphics interconnect port as claimed in Claim 15 or of a digital flat panel interconnect standard as

recited in Claim 16. Unless the Examiner can identify precisely where in the Waschura reference the limitations of Claims 15 and 16 are located, they should be allowed.

As for Claims 17-18, the applicant cited column 8, lines 63-67 of Waschura as ostensibly teaching the Claim 14 steps of "determining" and "providing" in real time. The applicant submits that column 8, lines 63-67 does not teach the Claim 14 steps of determining and providing in real time. A review of column 8, line 63 shows that it recites that a period of time elapses and is therefore not "real-time" as claimed in Claim 17. There is no passage of the Waschura reference identified, which recites that, the Claim 17 steps occur at a clock rate of at least 100 megahertz.

For all of the foregoing reasons, the applicant submits that the rejection of Claims 14 to 18 under 35 U.S.C. § 102(b) was improper and at that the rejection should be withdrawn.

Claims 19-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,537,145 (to Miseli) in view of U.S. Patent No. 4,772,948 (to Irvin). The Examiner asserted that Miseli teaches an apparatus for testing digital graphics data and cites figures 1-2 and column 2, lines 15 to 22 in support thereof.

The Applicant submits that Miseli teaches a method of visually testing screen displays.

Figures 1 and 2 of the Miseli reference show, among other things, a video subsystem. However, neither the figures nor the text in column 2, lines 15-22 teach the testing of digital graphics data as claimed in claim 19. Column 2, lines 15-22 cited by the Examiner teaches the need for a method for testing screen displays, and in particular flat panel screen displays.

The Examiner cited the system bus 130 of Miseli as ostensibly corresponding to the claimed connector, which interfaces to a digital graphics protocol as claimed in Claim 19. The applicant respectfully submits that Miseli's "system bus 130" is not a connector and that the Examiner's reliance upon the "system bus 130" as corresponding to a "connector to interface to a digital graphics protocol" is misplaced.

The Examiner cited the "spectrum analyzer 128" as ostensibly corresponding to the graphics data analyzer module recited in Claim 19. In column 5 at line 24, the specification describes "signal evaluation" as being depicted in figure 2b. A signal-testing device 128 is shown as being coupled to the display bus 136 the output of which is connected to the display device 135. In contrast, the claimed graphics data analyzer module has an input coupled to the connector that interfaces to the graphics protocol and has an output, which is coupled to a graphics data analyzer module. The spectrum analyzer 128 cited by the Examiner as ostensibly corresponding to the claimed graphics data analyzer module does not have any sort of output as claimed in Claim 19, which is coupled to an input of a serial bus interface control module.

Accordingly, the Examiner's reliance upon this spectrum analyzer 128 or any other structure shown at figure 2b is also misplaced.

The Examiner relied upon column 4, lines 54 through column 5, line 7 as ostensibly showing the serial bus interface control module recited in Claim 19. The passage of the Miseli patent cited by the Examiner describes an idle subsystem 120. After reviewing this passage of the Miseli patent, the applicant is unable to locate where there is taught, a serial bus interface control module having an input coupled to the output of a graphics data analyzer module. The applicant submits that the Examiner is either misinformed about Miseli, or has inadvertently cited to the wrong passage of the Miseli reference because column 4, lines 54 through 5* line 7* does not show or suggest the claim limitation of a serial bus interface control module as claimed in Claim 19.

As for Claim 20, the Examiner cited figure 2 of Miseli as showing a system wherein the serial port is coupled to a connector to transmit serial data based upon the digital graphics protocol. Claim 20 further limits the scope of Claim 19.

Claim 20 claims that the serial data port claimed in Claim 19 is coupled to a connector to transmit serial data based upon the digital graphics protocol. Although figure 2 of Miseli does show a computer system, the Examiner has not identified where the claim limitations of Claim 20 are located. The Examiner's reliance on figure 2 of Miseli as ostensibly showing the limitations of Claim 20 is misplaced. The rejection of Claim 20 should be withdrawn unless the Examiner can cite a specific reference where the claim limitation is located.

As for Claim 21, the limitations of Claim 20 are claimed as relying upon the digital graphics protocol being the digital flat panel standard. The Examiner cited Miseli, column 2, lines 15-21 as ostensibly showing or teaching the "digital flat panel standard." A review of the passage cited by the Examiner shows that it does not mention the "digital flat panel standard." Accordingly, the Examiner's reliance upon Miseli appears to be misplaced. The rejection of Claim 21 should be withdrawn and the claim allowed to issue unless the Examiner can cite to a specific passage in a specific reference that teaches that the digital flat panel standard is the digital graphics protocol claimed in Claim 19.

As for Claim 22 the Examiner admitted that Miseli does not teach a power supply terminal to receive power from the PCI bus, but cited Irvin as ostensibly teaching the limitations of Claim 22. The applicant has considered the Irvin reference and is unable to locate therein, where it teaches a power supply terminal to receive power from a PCI bus. A search of this text of the specification of the Irvin reference failed to identify where in that specification the PCI

bus is taught. Accordingly, the applicant submits that the reliance upon Irvin and/or Miseli is misplaced and that Claim 22 is allowable.

As for Claims 23-24 the Examiner asserted that these two method claims correspond to the apparatus claimed in Claim 19, but did not identify where in any reference the claim steps are located. The Examiner relied upon his analysis of Claim 19 as ostensibly disclosing the steps of Claims 23 and 24. Unless the Examiner can point to specific passages of Miseli that teach the limitations of Claim 23 and Claim, 24 the applicant submits that their rejection is improper and should be withdrawn.

Claims 1-2 and 16-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Waschura reference in view of Miseli. The Examiner asserted that Claim 1 differed only from Claim 14 in the recitation of the step of providing digital graphics data. The Examiner asserted Miseli teaches a method of testing digital graphics data and cited column 2 lines 15-36.

Miseli does not teach a method of testing digital graphics *data*. Miseli teaches a method of visually testing screen displays.

The applicant's claimed method includes sending the digital graphics data to a graphics device, calculating an expected characteristic based upon a representation of the data and comparing the calculated characteristic to an expected or actual characteristic. Miseli does not show or suggest the claim limitations. The Examiner's reliance on Miseli is misplaced. Claim 1 is allowable over the cited prior art.

As for Claim 2, the Examiner failed to cite any reference showing the combination claimed in Claim 2. Claim 2 claims independently-patentable subject matter. The rejection of Claim 2 was improper.

With respect to Claim 6, which depends on Claim 2, the Examiner stated that Miseli in column 4 at lines 45-53 teaches that the digital graphics data includes a digital graphics vertical synchronization component.

After reviewing column 4 of Miseli, lines 45 to 53, the applicant is unable to identify where there is shown or suggested digital graphics data that includes digital graphics vertical synchronization components. This passage of Miseli simply teaches that the video signals should contain coherent timing data. It is not seen how this passage teaches digital graphics data or that digital graphics data includes a digital graphics vertical synchronization component.

Claim 6 claims independently-patentable subject matter. The rejection of Claim 6 was improper.

As for Claim 7, which claims that the calculated expected characteristic is a CRC value, no reference or combination of references cited by the Examiner shows or suggests the

limitations of Claim 7. The applicant submits that claim 7 should be allowed because claim 7 claims independently-patentable subject matter.

Regarding Claims 8 to 10, no reference or combination of references cited by the Examiner shows or suggests that the predetermined type of digital graphics data is selectable. The passage cited in column 7, lines 15-29, which was cited by the Examiner, teaches a manual testing process. A video test pattern, which is a pattern shown on the display, can be dynamically altered, however that is distinctly different from the claim subject matter of Claim 8 that the data under test is selectable. Claim 8 is not shown in any reference or combination of references cited by the Examiner and is therefore allowable over the prior art of record.

Claim 9 recites the step of receiving the representation of graphics data at real time and calculating and providing in real time. The Examiner wholly failed to identify any reference that shows or suggests the steps claimed in Claim 9 or Claim 10. Accordingly, the applicant submits that these claims claim independently-patentable subject matter and are allowable.

Claims 11 to 13 were ostensibly shown by the Miseli reference in columns 2, lines 15 to 21. A review of this passage of the Miseli reference shows that it does not show or suggest at all, the subject matter recited in Claims 11, 12 or 13. Claims 11, 12 and 13 claim independently-patentable subject matter.

Claims 3-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Waschura in view of Miseli as applied to Claim 1, and further in view of Irvin. The Examiner combined Waschura and Irvin to ostensibly show that the predetermined graphics data includes at least one of red, green and blue color components. Claims 3, 4 and 5 all claim independently-patentable subject matter.

The Irvin reference does indeed show a color map with red, green and blue components delivered to an RGB monitor. However, the claimed subject matter of Claim 3 is the method claimed in Claim 2 and Claim 1. No reference or combination of references cited by the Examiner shows or suggests the steps of Claim 1 or Claim 2. The recitation in Claim 3 that the predetermined type of digital graphics data that is tested as claim to Claim 1 is shown. In Irvin ignores the fact that the underlying limitations of Claims 1 and 2 are not shown in any reference. Claim 3 therefore is submitted to be allowable over the prior art.

Similarly for Claim 4, no reference or combination of references cited by the Examiner teaches the claimed combination recited in Claim 1, further limited by Claim 2, to be a predetermined type of digital graphics data, and in Claim 4 where that claimed data is a horizontal synchronization component. Accordingly, Claim 4 is also allowable over the prior art of record.

For the same reason, Claim 5 is allowable in that it limits the data recited in Claim 4 to be at least one of red, green and blue color components.

In conclusion, the applicant has submitted a revised figure 2 traversing the Examiner's objection to the drawing under 37 C.F.R. 1.84 (b)(4).

As for the claim rejections, the applicant respectfully requests the Examiner to reconsider the claims and to specifically identify where the limitations of each claim can be found in the cited art or other art. As set forth above, the references identified by the Examiner do not show or suggest the claim limitations. Accordingly, the claims are in condition for allowance unless the Examiner can find other references that show or suggest the claims subject matter.

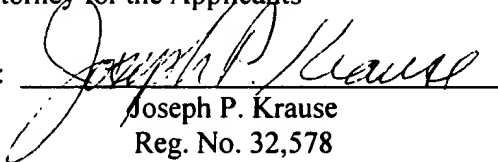
Should the Examiner wish to discuss the application, he is invited to conduct the undersigned at his convenience at: (312) 609-7536.

Respectfully submitted,

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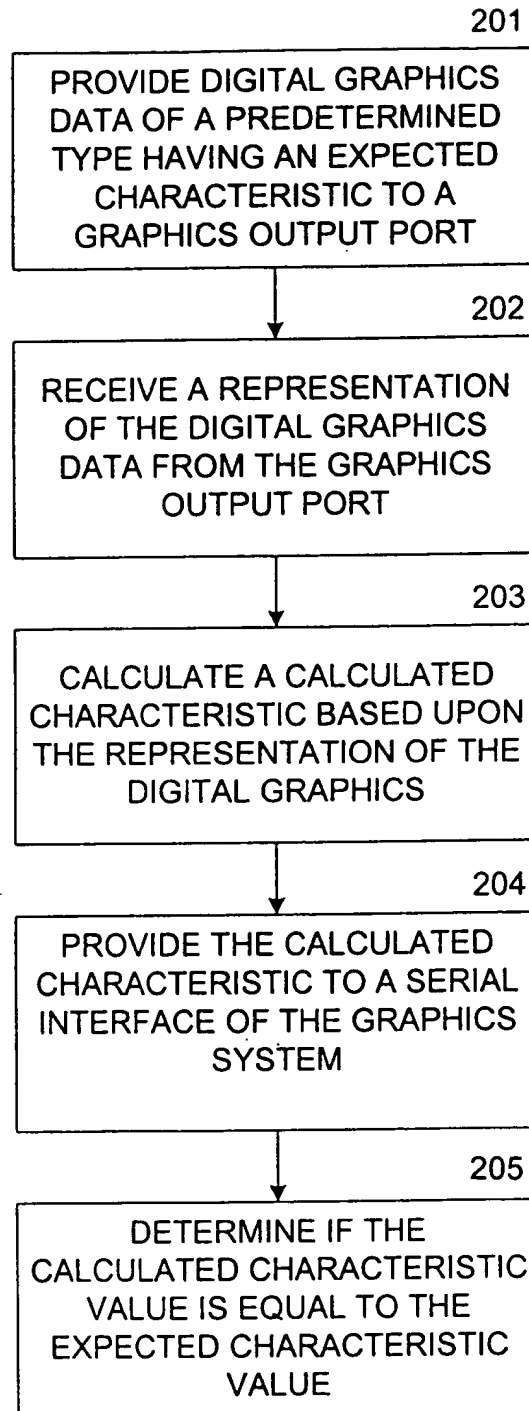


FIGURE 2